

BOARD OF EDUCATION.

MEMORANDUM ON COURSES OF WORK IN RURAL EVENING SCHOOLS.

The Board of Education have judged it desirable to circulate in advance to local education authorities the extract given below, from the forthcoming volume of syllabuses, &c., for the year 1906-7. This extract indicates the lines which should be followed in the preparatory courses of work in rural evening schools; and to it there are here added some suggestions bearing upon the technical instruction which should follow these preparatory courses. It may be worth while to state briefly the nature of the problem of providing in rural areas for the further instruction of those whose occupation is other than study, and to note some of the considerations which affect the solution of that problem. From the point of view here considered the population of any district, urban or rural, may be broadly classified in two divisions, namely, (a) those whose circumstances justify a more or less extended period devoted to study, and (b) those whose position compels them to devote the whole of most working days to earning their livelihood, a class which, in rural districts, includes farm labourers, occupiers of holdings of less than 50 acres, village mechanics, small shop-keepers, working carters, &c.

The educational requirements of members of the former class are to be met, and are already partly met, as regards preliminary training, by secondary schools and higher elementary schools, and, as regards further and technical training, by farm schools, agricultural colleges, or by short courses in agriculture and horticulture. On the other hand, facilities for the further education of the less well-to-do members of the rural population have not reached a corresponding stage of development. In view of this fact and of the relatively

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large numerical proportion of such persons, it appears that in very many areas this matter is one to which careful attention should be given.

There are well recognised difficulties to be overcome in dealing with the problem of the supply of suitable technical education to the working classes in rural districts. Careful selection of matter and methods of instruction, and active sympathy on the part of people of influence, are alike necessary to overcome the apathy of young men and women towards continuing the education they have received in the elementary day school. The earlier part of their further education must be sufficiently related to their outside interests to appeal to them as something of definite advantage; and this should be followed by work which in itself increases their wage-earning capacity. Every effort should be made to obtain teachers having a first-hand knowledge of rural conditions and needs; the class-room subjects may often with advantage be taught by the elementary school teacher, who in many cases will also be qualified to teach a practical subject; but in certain practical subjects a special teacher will be necessary, who in most districts will be the county lecturer in that subject. The increasing care which is being taken to connect the work of the public elementary day school with the surroundings of the scholars goes to enable the day school teacher who may be called upon to teach in the evening school, to enter into the spirit of the instruction which is there required, while improvements effected in the day school curriculum cannot but render the pupils on leaving school better fitted to enter upon the higher and more technical work of the evening school.

Educational economy and educational efficiency are both more easily secured where classes can be concentrated in relatively large and well staffed schools. In any well considered organisation of rural education it is therefore necessary to bestow some thought on the question of the grouping of villages which may be served by one school situated in the most central village, and as easy of access from the remaining members of the group as is possible in the circumstances. To deal effectively with this matter, as well as with such special

difficulties as the poverty of the students, the sparseness of the population, and the want of means of communication, experience has demonstrated the advantage of relying to a considerable extent on the local knowledge and the co-operation of persons living in the district. Indeed, genuine local interest is an almost essential factor in the success of rural evening schools : so that wherever such a grouping as that indicated above has been carried out, steps should be taken to secure the appointment of managers who will be representative of the constituent members of the group, and will be likely to maintain an effective connection between the county authority and those for whose benefit the courses of instruction in the neighbourhood are maintained.

Extract from the Volume of Syllabuses, &c.

RURAL EVENING SCHOOLS.

“In the curriculum of evening school work for a rural area the various subjects should be linked together so as to form a connected whole and to induce the students to extend their period of study over at least two or three years. ^{Courses of instruction.} ^{instruction.} Regard must also be paid to the age and attainments of the students. Thus, for example, for adults the instruction must be as closely related as possible to their daily work, present or prospective ; while for boys who have recently left school the instruction, at any rate for the first year, may be of a more general character, but in this case, too, it should be directly related to rural life. Further, in the case of adults who have forgotten much of what they learned at school, it may be necessary to incorporate in the course some instruction of a quite elementary character. Whatever may be the class of students expected to attend, the course of work should be framed with a view to the requirements of the local industry. In the case of men this will usually be the cultivation of the soil and industries dependent thereon ; but provision may have to be made in various localities for instruction in other industries. Although the curricula adopted in the various schools may rightly exhibit considerable differences, any rural technical course falls almost of necessity

into two broad divisions, the one being introductory to the other. These divisions may be termed the preparatory course and the technical course respectively. In most rural evening schools a preparatory course of at least one year is at present necessary, and such a course leads easily to the technical course of succeeding years.

Preparatory
course.

“The preparatory course should be designed to complete and expand the elementary education received in the day school, but the special reference to country life and work should be more strongly emphasized. The course must aim at cultivating and broadening the intelligence of the students and their interest in rural life and work. It should render the students more alert and more ready to seize such opportunities of mental and material progress as may present themselves. The following will, as a rule, be suitable components of this part of the training:—

- (a) On one night a week reading, writing, composition, citizenship, geography, arithmetic, and rural science ;
- (b) and on a second night woodwork or other handicraft, with drawing and mensuration ; and, in the summer months, gardening.

“There is, however, no very strict line of demarcation between these two sets. Arithmetic, for example, merges into mensuration ; and any of the subjects of the drawing exercises may afford matter for a fifteen minutes’ exercise in composition. The scope of the instruction which might be given in a course whose component parts were those indicated above is here outlined in general terms ; but should the course in a school be limited to one year, the extent to which these several subjects will be included in it will necessarily depend largely upon local conditions.

“The subject-matter of the instruction in reading should be of rural interest, and might include the following:—The Parish Council and Parish Meeting ; Co-operation ; Agricultural Credit ; Markets ; the Small Holdings and Allotments Acts ; Natural History ; Farm

Animals and Crops ; Physical Phenomena such as rain and rainfall (with measurements), Temperature, Water in its three forms, Air, and the Barometer. Where necessary, reading lessons should be illustrated by specimens, diagrams, and experiments.

“ Writing should be based on suitable matter such as forms of letters and addresses, forms of accounts, the making out of weekly budgets of working-class families in town and country.

“ The instruction in arithmetic should, as a rule, be limited to calculations likely to occur in the work and life of the students, and should include problems relating to such matters as the capital required for a small holding, cost of tillage, cost of carriage by rail, road, canal, and post. Of special importance on the one hand are prices of materials, seeds and produce, cost of food for animals, and on the other simple mensuration of areas of rectangular plots, contents of a corn box or of a water cistern, and similar things.

“ In drawing exercises, special attention should be given to dimensioned and scale drawing of poultry houses, pigsties, beehives, garden premises, simple wooden implements and simple furniture for the house : with such exercises should be associated calculations of the quantities and cost of timber required for the objects drawn.

“ Woodwork should include the methods of construction which would be required in making the things named under drawing.

“ Geography teaching should commence with the district as region, and should not omit such subjects as communication by road, rail, canal, and post to centres ; distances, fares, and rates ; the geography of districts at home and abroad where there is competition with local industry.

“ It should be clearly understood that it is only for convenience of description that the subjects of the course are thus separately specified. The course is really one

subject, and indeed might well find its text in a single reading book, for the teacher will find in the subject-matter of the reading many possible exercises in composition, oral as well as written, as well as many points which lend themselves to illustration by arithmetical calculations.

“The introductory course outlined above is suitable for boys or young men. A preparatory course adapted for the education of girls or women should be arranged so as to bear clearly upon their ultimate training in Domestic Arts, and in such rural or other industries as are likely to fall to their lot. The selection of matter for the reading, writing, composition, geography, and arithmetic lessons should be determined by this consideration; and some section or aspect of domestic work should in their course be substituted for such subjects as woodwork and mensuration.

“A complete course in Domestic Arts for the wives and daughters of working men should include instruction in cooking, washing, knitting, darning, and mending; the making of underclothing and of children's clothes; with the keeping of household accounts, and cottage economy generally. Special attention should be paid to the first principles of health and nutrition; to the choice and price of food within the purchasing power of the students; to the distribution of the expenditure as between food, clothing, rent, &c., and to the planning of meals and dietaries suited to the requirements and means of a working-class family. Any course, however, of this character fails in its object unless the teacher clearly realises the limitations inseparable from household management under cottage conditions and adapts the course of work to those limitations.”

Suggestions bearing on Technical Courses.

The preparatory and general course of instruction suggested for men suitably precedes a course of a special character affording technical training for the students. Owing to the variety of rural occupations and industries it is not possible to do more here than to direct attention

to the most important of the matters likely to require consideration in the organisation of proper courses of technical instruction for rural students.

The aims of the technical course will be to make the student a better workman ; to enable him to add to his resources by work done outside that by which he mainly earns his living ; and to train him in operations a knowledge of which will make his home more nearly self-contained. Which of these aims will be made predominant in any course will depend upon local conditions and requirements. It is, moreover, unlikely that a given course could be extended over so long a period of training as to embrace all three of them. Technical courses.

It is generally acknowledged to be of the greatest importance that the labourer and small farmer should receive definite training in the manual operations of the farm, and a number of local authorities have organised successful courses of work of this kind. The teacher may be either a county staff instructor or an intelligent farm labourer or foreman recognised as specially skilled in the particular manual process to be taught. Among the manual farm processes for instruction in which provision should be made, the following are the more important :—Hedging, ditching, thatching, and ploughing, and the care and use of farm machinery ; and, though not strictly falling within the definition of manual processes, the duties of stockman, shepherd, and teamster may also be considered here. Since technical training of this type is, as a rule, best given in the daytime, and in lessons extending over some hours, the manner in which the necessary facilities can be secured will be matter for local arrangement. It is clear that to secure full educational value from any course of manual training such as those contemplated in this paragraph, it is necessary to supplement the training in hand-work by a discussion of the methods, tools, and materials used in the several operations, of the conditions of plant and animal life, and of other matters germane to the manual course. Manual processes.

The aid afforded by the Board's grants is available for classes which meet in the daytime equally with classes meeting in the evening, the intention of the class, and

not the hour of meeting, being the essential factor in the question of the eligibility of the class for recognition by the Board.

In connection, however, with training in manual processes, reference should be made to Section 32, Division IV. (b), of the Regulations for Technical Schools, &c.; from this it will be seen that in the case of courses involving some practice in the processes of an industry, the aid afforded by the Board's grants is available in respect of instruction in the principles that underlie the methods of work, and also in respect of such practical instruction in that work as is necessary to illustrate the application of these principles. But in so far as such a course consists of practice with a view to the acquirement of manipulative skill, it is beyond the field for which these grants are given. This limitation does not, however, extend to the provision of such instruction out of the residue grant or other funds at the disposal of the local education authority, and the Board estimate the basis for Their own grants without requiring sectional records of the actual work of instruction. The observations and suggestions made here as to technical courses for agricultural labourers and others have reference, therefore, to their technical training as a whole, irrespective of the extent to which grants under these regulations may be made in respect of it.

Courses of instruction in the management of the cottage garden, allotment, and small holding.

Instruction designed to enable the student to supplement his ordinary earnings will generally centre round one or more of the three following spheres of activity, viz.:—(i) the garden, (ii) the allotment, and (iii) the small holding. Here, as in the case of the preparatory part of the rural course, the instruction is in one course, the subject of which is: How to manage a garden, an allotment, or a small holding, with their several appurtenances. It may be necessary to introduce into such a course portions of several subjects, but these portions will be closely woven into an organic whole. Thus, for example, a course of instruction in management of an allotment might be framed somewhat on the following lines, and might usefully serve as an adjunct to the practical work done on the allotments during the spring and summer months.

Such elementary instruction as is necessary with reference to the underlying rock of the neighbourhood in relation to the subsoil, the soil, the characters of light and heavy soils, and how tillage alters the physical and chemical nature of the soil. The most suitable farm and garden crops for the locality with cultural directions. Fruit and vegetable culture; pig-keeping; poultry-keeping; the special value of each of these in connection with allotments. The financial aspect of allotment cultivation; co-operation between allotment holders for purposes of cultivation and for the marketing of produce; the Allotments and Small Holdings Acts.

Specimen
course,
instruction
in Allotment
Manage-
ment.

A course of lessons on these subjects would be accompanied by illustrations and demonstrations of the scientific principles to which attention was directed. There would be also plenty of class exercises; as, for example, English composition on the subject of some of the lessons, calculations of quantities and cost of food for animals, and the preparation of very simple balance sheets. The practical work to be done by the students might include simple land measurement with calculations; practice in the propagation of bush fruit by cuttings and fruit trees by grafting; constructional carpentry. As regards the arrangement of the time-table two evenings each week during the winter and one evening a week during the summer would probably be sufficient.

The class lessons and exercises and carpentry instruction should be taken mainly during the winter, the out-door work being reserved for the spring and summer months.

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Each elementary reaction is a necessary step
in the mechanism of the reaction. The
involvement of the reactants in the
initial step is usually indicated by the
stoichiometric coefficients of the reactants
and products. The rate of reaction is
determined by the slowest step, the
rate-determining step. The rate of
reaction is also affected by the
concentration of the reactants and
the presence of catalysts.

A reaction is said to be elementary if it
occurs in a single step. The rate of
reaction is then proportional to the
product of the concentrations of the
reactants raised to the power of their
stoichiometric coefficients. The rate of
reaction is also affected by the
presence of catalysts. The rate of
reaction is also affected by the
temperature of the reaction.

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